



Conveyor Belt Innovation



Esbelt's Metal Detectable Conveyor Belt POLER 0802MD helps address the issue of plastic contamination of food products.

Conveyor belts can get jammed, break, or wear down, sometimes resulting in bits of plastic entering the food production line, notes Donald Harvey, business development manager in the U.S. and Canada for Esbelt, S.A., Barcelona, Spain, a manufacturer of conveyor belts.

In November 2016, Esbelt introduced in the U.S. an innovative new conveyor belt that is helping to address this issue of potential plastic contamination.

Esbelt's Metal Detectable Conveyor Belt POLER 0802MD incorporates a unique formulation of DuPont Hytrel TPC-ET thermoplastic polyester elastomer (Hytrel) which is detectable in metal detection and X-ray inspection machines, according to Franco Marabelli, global business consultant, development material handling, for DuPont Performance Materials.

"A special food grade Hytrel has been enriched so that it can be detected by metal and/or X-ray detectors and offer the flexibility of rubber with the strength and processability of thermoplastics to produce conveyor belts," Marabelli elaborates.

Compliant with FDA and EU food regulations, the Poler 0802MD is recommended for areas where scrapers, cleaners, or highly abrasive food products are used, according to the belt's product brochure, which also mentions that in the unlikely event that the belt cover is chipped or scratched, the belt is detectable by standard metal detection systems. Due to its material density, the belt compounds can be detected by X-ray inspection equipment, this same Esbelt literature states.

"Following the shared standards of metal detector manufacturers, Esbelt has established a direct correlation between detectability of conveyor belt pieces of given sizes and that of metallic balls of given diameters," adds Federico Segura Roda, Esbelt's president.

Harvey emphasizes that not all Esbelt conveyor belts using the original Hytrel are metal detectable. "We use both standard and metal detectable Hytrel compounds," he relates.

"The Poler 0802MD conveyor belt material is detectable in a metal detector," Harvey relates. "However, it's important to keep in mind that the belt's metal detectable and X-ray inspection qualities are dependent on the capacities of the specific metal detector that is utilized and its setup by the end user. There are three variables facing metal detection and X-ray inspection today, namely the product type to be inspected, environmental noise, and set up, so it's important to conduct tests with each product to determine detectable size."